## CLAIM AMENDMENTS

Please amend the claims as follows.

1. (**Currently Amended**) An apparatus for generating a mist comprising: a conduit having a mixing chamber and an exit; and a means for creating a dispersed droplet flow regime in which a substantial portion of the droplets have a size of less than 20 micrometers, said means comprising: a working fluid inlet in fluid communication with said conduit, ~~the working fluid inlet adapted~~ to introduce a working fluid into the conduit; and a transport nozzle in fluid communication with the ~~said~~ conduit, ~~the transport nozzle adapted~~ to introduce a transport fluid into the mixing chamber; ~~characterised in that~~ wherein the transport nozzle includes a convergent-divergent portion therein ~~such as in use~~ to provide for the generation of high velocity flow of the transport fluid; and wherein the transport nozzle and conduit have a relative angular orientation ~~such that in use the working fluid is atomised and a dispersed droplet flow regime of droplets is created in~~ at the mixing chamber ~~by~~ for the introduction of transport fluid flow from the transport nozzle into working fluid flow from the conduit and ~~the subsequent~~ for shearing of the working fluid by the transport fluid, ~~wherein the angular orientation of the transport nozzle and conduit is such that the shearing of the working fluid creates a dispersed droplet flow regime in which a substantial portion of the droplets have a size of less than 20 micrometers~~.

2. (**Currently Amended**) The apparatus of claim 1, ~~wherein the~~ comprising a means for creating working fluid droplets ~~have~~ having a substantially uniform droplet distribution having droplets with a size less than 20 micrometers.

3. (**Currently Amended**) The apparatus of claim 1, ~~wherein the~~ comprising a means for creating a substantial portion of the droplets ~~has~~ having a cumulative distribution greater than 90%.

4. (**Currently Amended**) The apparatus of claim 1~~, wherein~~ comprising a means for creating a substantial portion of the droplets ~~have~~ having a droplet size less than 10 micrometers.

5. (**Currently Amended**) The apparatus of claim 1 further comprising an annular working nozzle substantially circumscribing~~, wherein~~ the transport nozzle ~~substantially circumscribes the conduit~~.

6. (Original) The apparatus of claim 1, wherein the mixing chamber includes a converging portion.

7. (Withdrawn) The apparatus of claim 1, wherein the mixing chamber includes a diverging portion.

8. (**Currently Amended**) The apparatus of claim 1, wherein ~~the internal geometry of~~ the transport nozzle has an ~~area ratio, namely~~ exit area to throat area ratio~~,~~ in the range 1.75 to 15, ~~having~~ and has an included alpha-angle substantially equal to or less than 6 degrees for supersonic flow~~, and substantially equal to or less than 12 degrees for sub-sonic flow~~.

9. (Original) The apparatus of claim 1, wherein the transport nozzle is oriented at an angle beta of between 0 to 30 degrees.

10. (**Currently Amended**) The apparatus of claim 1, wherein the transport nozzle is annular and ~~shaped such that transport fluid introduced into the mixing chamber through the transport nozzle~~ has a divergent ~~or convergent~~ flow pattern at the mixing chamber.

11. (Original) The apparatus of claim 10, wherein the transport nozzle has inner and outer surfaces each being substantially frustoconical in shape.

12. (Original) The apparatus of claim 1, further including a working nozzle in fluid communication with the conduit for the introduction of working fluid into the mixing chamber.

13. (Withdrawn) The apparatus of claim 12, wherein the working nozzle is positioned nearer to the exit than the transport nozzle.

14. (**Currently Amended**) The apparatus of claim 12, wherein the working nozzle is ~~shaped such that working fluid introduced into~~ annular at the mixing chamber ~~through the working nozzle has a convergent or divergent flow pattern~~.

15. (Original) The apparatus of claim 12, wherein the working nozzle has inner and outer surfaces each being substantially frustoconical in shape.

16. (Withdrawn) The apparatus of claim 1, further including a second transport nozzle being adapted to introduce further transport fluid or a second transport fluid into the mixing chamber.

17. (Withdrawn) The apparatus of claim 16, wherein the second transport nozzle is positioned nearer to the exit than the transport nozzle.

18. (Withdrawn) The apparatus of claim 17, wherein the second transport nozzle is positioned nearer to the exit than the working nozzle, such that the working nozzle is located intermediate the two transport nozzles.

19. (Original) The apparatus of claim 1, wherein the conduit includes a passage.

20. (**Currently Amended**) The apparatus of claim 19, wherein the inner wall of the passage ~~is adapted with~~ comprises a contoured portion comprising a means to induce turbulence of the working fluid upstream of the transport nozzle.

21. (Original) The apparatus of claim 1, wherein the mixing chamber includes an inlet for the introduction of an inlet fluid.

22. (Original) The apparatus of claim 1, wherein the mixing chamber is closed upstream of the transport nozzle.

23. (Withdrawn) The apparatus of claim 1, further including a supplementary nozzle arranged inside the transport nozzle and adapted to introduce further transport fluid or a second transport fluid into the mixing chamber.

24. (Withdrawn) The apparatus of claim 23, wherein the supplementary nozzle is arranged axially in the mixing chamber.

25. (Withdrawn) The apparatus of claim 23, wherein the supplementary nozzle extends forward of the transport nozzle.

26. (Withdrawn) The apparatus of claim 23, wherein the supplementary nozzle is shaped with a convergent-divergent profile to provide supersonic flow of the transport fluid which flows therethrough.

27. (Withdrawn) The apparatus of claim 1, further including control means adapted to control one or more of droplet size, droplet distribution, spray cone angle and projection distance.

28. (Original) The apparatus of claim 1, further including control means to control one or more of the flow rate, pressure, velocity, quality, and temperature of the inlet and/or working and/or transport fluids.

29. (Withdrawn) The apparatus of claim 27, wherein the control means includes means to control the angular orientation and internal geometry of the working and/or transport and/or secondary nozzles.

30. (Withdrawn) The apparatus of claim 27, wherein the control means includes means to control the internal geometry of at least part of the mixing chamber or exit to vary it between convergent and divergent.

31. (Withdrawn) The apparatus of claim 1, wherein the exit of the apparatus is provided with a cowl to control the mist.

32. (Withdrawn) The apparatus of claim 31, wherein the cowl comprises a plurality of separate sections arranged radially, each section adapted to control and re-direct a portion of the discharge of mist emerging from the exit.

33. (Withdrawn) The apparatus of claim 1, wherein the apparatus for generating a mist is located within a further cowl.

34. (Withdrawn) The apparatus of claim 1, wherein at least one of the transport, secondary or working nozzles is adapted with a turbulator to enhance turbulence.

35. (**Currently Amended**) A spray system comprising the apparatus of claim 1 and transport fluid in the form of steam.

36. (Original) The spray system of claim 35, further including working fluid in the form of water.

37. (Original) The spray system of claim 35, further including a steam generator and water supply.

38. (Original) The spray system of claim 37, wherein the spray system is portable.

39. (**Currently Amended**) A method of generating a mist comprising the steps of: introducing a flow of transport fluid into a mixing chamber through an annular transport nozzle; introducing a working fluid into the mixing chamber through an annular working nozzle ~~conduit~~; generating a high velocity flow of the transport fluid by way of a convergent-divergent portion within the transport nozzle; orienting the transport nozzle and ~~conduit~~ the working nozzle such that the high velocity transport fluid flow imparts a shearing force on the working fluid flow; and ~~atomising~~ atomizing the working fluid and creating a dispersed droplet flow regime of droplets under the shearing action of the working fluid on the transport fluid~~, wherein the shearing action creates a dispersed droplet flow regime~~ in which a substantial portion of the droplets have a size less than 20 micrometers.

40. (canceled)

41. (Original) The method of claim 39, wherein the stream of transport fluid introduced into the mixing chamber is annular.

42. (**Currently Amended**) The method of claim 39, wherein the ~~working fluid is introduced into the mixing chamber via an inlet of the mixing chamber of the~~ apparatus has an axis and the working nozzle is defined by a working nozzle outer surface facing inward toward the axis and a working nozzle inner surface facing outward away from the axis; wherein at least part of the working nozzle outer surface converges toward the axis in a direction along the axis toward the mixing chamber.

43. (**Currently Amended**) The method of claim 39, wherein the ~~working fluid is introduced into the mixing chamber via a~~ working nozzle circumscribes the transport nozzle ~~in fluid communication with the conduit of the apparatus~~.

44. (Original) The method of claim 43, wherein an inlet fluid is introduced into the mixing chamber via an inlet of the mixing chamber of the apparatus.

45. (Withdrawn) The method of claim 39, wherein the method includes the step of introducing the transport fluid into the mixing chamber in a continuous or discontinuous or intermittent or pulsed manner.

46. (Original) The method of claim 39, wherein the method includes the step of introducing the transport fluid into the mixing chamber as a supersonic flow.

47. (Original) The method of claim 39, wherein the method includes the step of introducing the transport fluid into the mixing chamber as a sub-sonic flow.

48. (Withdrawn) The method of claim 39, wherein the method includes the step of introducing the working fluid into the mixing chamber in a continuous or discontinuous or intermittent or pulsed manner.

49. (Original) The method of claim 39, wherein the mist is controlled by modulating at least one of the following parameters: the flow rate, pressure, velocity, quality

and/or temperature of the transport fluid; the flow rate, pressure, velocity, quality and/or temperature of the working fluid; the flow rate, pressure, velocity, quality and/or temperature of the inlet fluid; the angular orientation of the transport and/or working and/or secondary nozzle(s) of the apparatus; the internal geometry of the transport and/or working and/or secondary nozzle(s) of the apparatus; and the internal geometry, length and/or cross section of the mixing chamber.

50. (Original) The method of claim 49, wherein the mist is controlled to have a substantial proportion of its droplets having a size less than 20 micrometers.

51. (Original) The method of claim 49, wherein the mist is controlled to have a substantial proportion of its droplets having a size less than 10 micrometers.

52. (Original) The method of claim 39, including the generation of condensation shocks and/or momentum transfer to provide suction within the apparatus.

53. (Withdrawn) The method of claim 39, including inducing turbulence of the inlet fluid prior to it being introduced into the mixing chamber.

54. (Withdrawn) The method of claim 39, including inducing turbulence of the working fluid prior to it being introduced into the mixing chamber.

55. (Withdrawn) The method of claim 39, including inducing turbulence of the transport fluid prior to it being introduced into the mixing chamber.

56. (Original) The method of claim 39, wherein the transport fluid is steam or an air/steam mixture.

57. (Original) The method of claim 39, wherein the working fluid is water or a water-based liquid.

58. (Original) The method of claim 39, wherein the mist is used for fire suppression.

59. (Original) The method of claim 39, wherein the mist is used for decontamination.

60. (Original) The method of claim 36, wherein the mist is used for gas scrubbing.

61. to 123. (Canceled).